UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/074,600	02/12/2002	Robert Sultan	FJPR-186XX	4837

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EXAMINER
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ART UNIT	PAPER NUMBER
2157	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	10/074,600	SULTAN ET AL.
	Examiner	Art Unit	
	Hussein A. El-chanti	2157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _19 June 2007_.

2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1, 3, 4, 6-9, 11, 12 and 14-18_ is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1,3,4,6-9,11,12 and 14-18_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All b)☐ Some * c)☐ None of:

   1. ☐ Certified copies of the priority documents have been received.

   2. ☐ Certified copies of the priority documents have been received in Application No. _____.

   3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _4/02_.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1.   This action is responsive to amendment received on June 19, 2007. Claims 1, 6,

9, 14, 17 and 18 were amended. Claims 5 and 13 were canceled. Claims 1-4, 6-12 and

14-18 are pending examination.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1, 3, 4, 6-12 and 14-18 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Khansari et al., U.S. Patent No. 6,446,131 (referred to hereafter as

Khansari) in view of Tomizawa et al., U.S. Patent No. 6,598,092 (referred to hereafter

as Tomizawa).

As to claims 1 and 9, Khansari teaches a data communications network and

method, comprising:

a plurality of data communications networks, the plurality of networks including a

first network, a second network and a third network (see fig. 10),

wherein at least the second network is configured for spatial reuse (see fig. 10);

at least one first node coupled to the first network, the at least one first node

including an end station (see fig. 10);

at least one second node coupled to the second network (see fig. 10),

a first bridge configured to link the first network to the second network (see fig. 10); and

a second bridge configured to link the second network to the third network (see fig. 10, fig. 10 shows a firs, second and third bridge; a first, second and third networks),

wherein the second bridge is operative (1) to learn an association between the first bridge and the end station coupled to the first network, and (2) upon receiving a packet destined for the end station: (i) to forward on the second ring, the received packet as a broadcast transmission on the second network between the second bridge and the first bridge in a manner indicating that the packet is to be examined by each of the at least one second node coupled to the second network, in the event that the association between the first bridge and the end station coupled to the first network has not yet been learned (see col. 6 lines 36-52 and col. 7 lines 12-15 and 30-35, the bridge records a the networks and address of nodes connected to the network, if a packet destination address is not found, then the packet is transmitted to all the networks connected to the bridge), and (ii) to forward the received packet as a unicast transmission to the first bridge on the network in the event that the association between the first bridge and the end station has been learned (see col. 7 lines 18-28, if the destination address is found in the table, the packet is transmitted as a unicast to the destination node).

Khansari does not explicitly teach the network is a ring network. However Tomizawa teaches a multiple ring networks connected through multiple bridges (see fig. 9-12). It would have been obvious for one of the ordinary skill in the art at the time of the

invention to the method taught by Khansari in a ring network because doing so would

allow good survivability and the ability to provide simpler routing than other topologies

as explicitly suggested by Tomizawa (see col. 8 lines 42-46).

As to claims 2 and 10, Khansari teaches a data communications network

according to claims 1 and 9, wherein the end station comprises an internetworking

bridge (see fig. 10).

As to claims 3 and 11, Khansari teaches a data communications network

according to claims 2 and 10, wherein the interworking bridge provides transparent LAN

services via the network to customers connected to external LAN segments (see fig.

10).

As to claims 4 and 12, Khansari teaches a data communications network

according to claims 1 and 9, wherein the network is a resilient packet network (see fig.

10).

As to claims 6 and 14, Khansari teaches a data communications network

according to claims 1 and 9, wherein the end station is a first end station, and further

comprising a second end station, the second end station being coupled to the second

bridge, and wherein the first bridge is operative (1) to learn an association between the

second bridge and the second end station, and (2) upon receiving a packet destined for

the second end station: (i) to forward the received packet as a broadcast transmission

on the network in the event that the association between the second bridge and the

second end station has not yet been learned, and (ii) to forward the received packet as

a unicast transmission to the second bridge on the network in the event that the association between the second bridge and the second end station has been learned (see col. 7 lines 11-38).

As to claims 7 and 15, Khansari teaches a data communications network according to claims 6 and 14, wherein the first bridge learns the association between the second bridge and the second end station by monitonetwork a broadcast transmission of the second bridge on the network, the broadcast transmission including an identifier of the second bridge as an ingress bridge and an address of the second end station as a source of a message included in the transmission (see col. 7 lines 11-38).

As to claims 8 and 16, Khansari teaches a data communications network according to claims 6 and 14, wherein the network is a first data communications network, and further comprising (i) a second data communications network configured for spatial reuse, the second network coupling the second bridge to the second end station, and (ii) a third bridge, the third bridge being coupled to both the first and second networks as a backup to the second bridge, and wherein the second bridge is operative to send unicast update messages to the third bridge enabling the third bridge to keep track of the associations learned by the second bridge, and wherein the third bridge is operative upon failure of the second bridge to begin the learning of associations and the forwarding of packets on the first network as broadcast or unicast transmissions depending on whether respective associations have been learned (see col. 7 lines 11-38).

As to claims 17 and 18, Khansari teaches a data communication network and method of claims 1 and 9 respectively wherein the packet contains first and second information, the first information indicating an identity of at least one of a source node and a destination node of the packet, the second information indicating an identity of at least one of an ingress node and an egress node for the packet and wherein the second forwarding step includes forwarding the received packet as a unicast transmission to the first bridge on the network in the event that the association between the first bridge and the end station has been learned, the first information identifying the end station as one of the source node and the destination node of the packet, and the second information identifying the first bridge as one of the ingress node and the egress node for the packet (see col. 2 lines 27-54 and col. 3 lines 7-21).

Response to Arguments

3.   Applicant's arguments have been fully considered but are not persuasive. Applicant argues in substance that Khansari teaches forwarding unicast packet to an inbound port on the same device and not to a different bridge.

In response, Khansari teaches a system and method for forwarding packets where if the packet has a unicast address and the unicast address is found in the database, then the bridge forwards the packet to the destination address port (see col. 7 lines 18-25). However the unicast address is forwarded from the bridge's internal port to the inbound port of a different bridge associated with the destination node. For example, a unicast packet received at Bridge 3 and destined to node 26 of fig. 2b is forwarded through port 3 to Bridge 1 and then to node 26. Another example, a unicast packet

received at bridge 2 and destined to node 24 of fig. 2b is sent through port B2 to Bridge

1 and then delivered to node 24 (see fig. 2b and Table 2 in col. 5). Therefore Khansari

teaches "to forward the received packet as a unicast transmission to the first bridge on

the network in the event that the association between the first bridge and the end station

has been learned" as claimed.

4.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

5.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Hussein A. El-chanti whose telephone number is

(571)272-3999. The examiner can normally be reached on Mon-Fri 8:30-5:00.
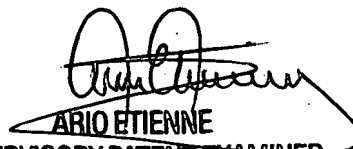
If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Ario Etienne can be reached on (571)272-4001. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

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For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hussein Elchanti

August 27, 2007

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